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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/743,269 | 12/23/2003 | Kurt Nilsson | 033972.549252 | 4452 |

7590 09/26/2006

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EXAMINER

HENRY, MICHAEL C

ART UNIT PAPER NUMBER

1623

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,269

Applicant(s)

NILSSON, KURT

Examiner

Michael C. Henry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-16 and 18-32 is/are pending in the application.
- 4a) Of the above claim(s) 20-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18, 19, 30-32 and 1016 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The following office action is a responsive to the Amendment filed, 06/19/06

The amendment filed 06/19/06 affects the application, 10/743,269 as follows:

1. Claims 10, 19 have been amended. Claim 17 has been canceled. Claims 20-29 have been withdrawn. New Claims 30-32 have been added. Applicants' amendments have overcome the 102 rejection of the prior office action. Upon further consideration the examiner has determined that the indicated allowable subject matter of the prior office action was not appropriate and consequently, the said allowable subject matter is withdrawn.

The responsive to applicants' arguments is contained herein below.

Claims 10-16 and 18-32 are pending in the application

Claim Objections

Claims 18 and 19 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 18 recites the phrase "The filtration material of claim 10, wherein the spacer has the formula $-\text{CO}(\text{CH}_2)_m\text{NH}-\text{CH}_2-\text{CH}(\text{OH})-\text{CH}_2-\text{O}-$ ". However, the claim is not further limiting, since the spacer that is recited in claim 10 does not have the formula $-\text{CO}(\text{CH}_2)_m\text{NH}-\text{CH}_2-\text{CH}(\text{OH})-\text{CH}_2-\text{O}-$. Similarly, claim 19 which depends on claim 10 recites the phrase "the spacer is $-\text{CO}(\text{CH}_2)_m\text{NH}-\text{CH}_2-\text{CH}(\text{OH})-\text{CH}_2-\text{O}-$ ". However, the claim is not further limiting, since none of the spacers that is recited in claim 10 have the formula $-\text{CO}(\text{CH}_2)_m\text{NH}-\text{CH}_2-\text{CH}(\text{OH})-\text{CH}_2-\text{O}-$.

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Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 30 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase “further wherein”, in claim 30 renders the claim indefinite. More specifically, it is unclear what the phrase “further wherein” refers to.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 10-12, 14-16, 18, 19, 30-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1, 18-30 of U.S. Patent No. 6,686,457 B1. Although the conflicting claims are not identical, they are not patentably distinct

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from each other because both inventions are directed to a composition comprising : a saccharide coupled to a spacer; and a matrix coupled to the spacer; wherein the spacer comprises a specific formula.

Claim 10 is drawn to a composition comprising: a saccharide coupled to a spacer; and a matrix coupled to the spacer; the matrix being a cross-linked agarose, wherein the spacer comprises the following formula: $-O(CH_2)_nPhNH-$, $-O(CH_2)_nNH-$, or $-N(Ac)-(CH_2)_nNH-$, wherein n is an integer selected from 0, 1, 2, 3, 4, 5, 6, or 7. Claim 11 is drawn said composition, further comprising a second spacer attached to the matrix. Claim 13 is drawn to said composition comprising specific mmole of bound saccharide per liter of matrix. Claim 14 is drawn to said composition comprising specific blood group A and B determinants bound to the matrix. Claims 15, 16, 18 and 19 are drawn to said composition wherein the saccharide binds specific organisms or substances and wherein the spacer is of specific structure. Claim 31 is drawn to said composition of claim 10 wherein the composition (filtration material) is in the form of particles. Claim 30 is drawn to a composition comprising: a saccharide coupled to a spacer; and a matrix coupled to the spacer; wherein the spacer comprises the following formula: $-O(CH_2)_nPhNH-$, $-O(CH_2)_nNH-$, or $-N(Ac)-(CH_2)_nNH-$, wherein n is an integer selected from 0, 1, 2, 3, 4, 5, 6, or 7 and wherein the bound saccharide is of specific mmole per liter of matrix. Claim 32 is drawn to said composition of claim 30 wherein the composition (filtration material) is in the form of particles.

Claim 1 of Nilsson et al. is drawn to a composition comprising: a saccharide-spacer-matrix coupled to the spacer; wherein the spacer has a specific formula. Claim 26 is drawn to the composition of claim 1 wherein the matrix include cross-linked agarose. Claims 18, 20-25,

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27-30 are drawn to said composition comprising blood group determinants A and B, wherein the saccharide binds specific organisms or substances and wherein the spacer is of specific structure.

The difference between applicant's claimed method and the method of Nilsson et al. is that applicant composition contains other spacers in addition to the spacer $(-\text{O}(\text{CH}_2)_n\text{NH}-)$ and the blood group determinants A and B disclosed by Nilsson et al. However, it is obvious to a skilled artisan to prepare Nilsson et al.'s composition comprising the spacer and blood group determinants A and B disclosed by Nilsson et al. $(-\text{O}(\text{CH}_2)_n\text{NH}-)$ and other similar compositions comprising similar spacers and blood group determinants that have the same utility as Nilsson et al.'s composition.

It would have been obvious to one having ordinary skill in the art, at the time the claimed invention was made to prepare Nilsson et al.'s composition comprising the spacer disclosed by Nilsson et al. $(-\text{O}(\text{CH}_2)_n\text{NH}-)$ and other similar compositions comprising similar spacers and blood group determinants that have the same utility as Nilsson et al.'s composition.

One having ordinary skill in the art would have been motivated to prepare Nilsson et al.'s composition comprising the spacer disclosed by Nilsson et al. $(-\text{O}(\text{CH}_2)_n\text{NH}-)$ and other similar compositions comprising similar spacers and blood group determinants in order to use them to treat blood.

Claims 10, 18, 30-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-3 of U.S. Patent No. 6,444,655 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because both inventions are directed to a composition comprising : a saccharide coupled to a spacer; and a matrix coupled to the spacer; wherein the spacer comprises a specific formula.

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Claim 10 is drawn to a composition comprising: a saccharide coupled to a spacer; and a matrix coupled to the spacer; the matrix being a cross-linked agarose, wherein the spacer comprises the following formula: $-\text{O}(\text{CH}_2)_n\text{PhNH}-$, $-\text{O}(\text{CH}_2)_n\text{NH}-$, or $-\text{N}(\text{Ac})-(\text{CH}_2)_n\text{NH}-$, wherein n is an integer selected from 0, 1, 2, 3, 4, 5, 6, or 7. Claim 11 is drawn said composition, further comprising a second spacer attached to the matrix. Claim 13 is drawn to said composition comprising specific mmole of bound saccharide per liter of matrix. Claim 14 is drawn to said composition comprising specific blood group A and B determinants bound to the matrix. Claim 18 is drawn to said composition wherein the spacer is of specific structure. Claim 31 is drawn to said composition of claim 10 wherein the composition (filtration material) is in the form of particles. Claim 30 is drawn to a composition comprising: a saccharide coupled to a spacer; and a matrix coupled to the spacer; wherein the spacer comprises the following formula: $-\text{O}(\text{CH}_2)_n\text{PhNH}-$, $-\text{O}(\text{CH}_2)_n\text{NH}-$, or $-\text{N}(\text{Ac})-(\text{CH}_2)_n\text{NH}-$, wherein n is an integer selected from 0, 1, 2, 3, 4, 5, 6, or 7 and wherein the bound saccharide is of specific mmole per liter of matrix. Claim 32 is drawn to said composition of claim 30 wherein the composition (filtration material) is in the form of particles

Claim 1 of Nilsson et al. is drawn to a composition comprising: a saccharide-spacer-matrix coupled to the spacer; wherein the spacer is $-\text{O-Et-PhNH-CO}(\text{CH}_2)_5\text{NH-CH}_2\text{-CH(OH)-CH}_2\text{-O-}$ (i.e., it comprises $-\text{O}(\text{CH}_2)_n\text{PhNH-}$ wherein $n=2$), and the matrix is a cross-linked agarose (i.e., Sepharose® 4 FF).

The difference between applicant's claimed method and the method of Nilsson et al. is that applicant composition contains other spacers in addition to the spacer ($-\text{O}(\text{CH}_2)_n\text{NH-}$). However, it is obvious to a skilled artisan to prepare Nilsson et al.'s composition comprising the

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spacer disclosed by Nilsson et al. $(-O(CH_2)_nNH-)$ and other similar compositions comprising similar spacers that have the same utility as Nilsson et al.'s composition.

It would have been obvious to one having ordinary skill in the art, at the time the claimed invention was made to prepare Nilsson et al.'s composition comprising the spacer disclosed by Nilsson et al. $(-O(CH_2)_nNH-)$ and other similar compositions comprising similar spacers that have the same utility as Nilsson et al.'s composition.

One having ordinary skill in the art would have been motivated to prepare Nilsson et al.'s composition comprising the spacer disclosed by Nilsson et al. $(-O(CH_2)_nNH-)$ and other similar compositions comprising similar spacers in order to use them to treat blood.

Response to Amendment

Applicant's arguments with respect to claims 10-16, 18-32 have been considered but are moot in view of the new ground(s) of rejection.

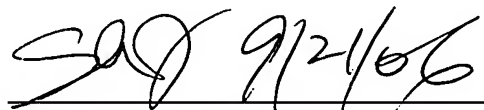
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Henry whose telephone number is 571-272-0652. The examiner can normally be reached on 8.30am-5pm; Mon-Fri. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Henry



Shaojia Anna Jiang, Ph.D.
Supervisory Patent Examiner
Art Unit 1623

September 20, 2006.